

WHAT IS CLAIMED IS:

1. A system for actuating at least one engine valve in an internal combustion engine with valve seating control, said system comprising:

a housing;

a lost motion system disposed in said housing;

a rocker arm having a first contact surface, a second contact surface, and a third contact surface, the first contact surface operatively contacting the engine valve, and the second contact surface operatively contacting said lost motion system; and

a valve seating device disposed in said housing, operatively contacting the third contact surface.

2. The system of Claim 1, wherein said valve seating device further comprises:

a lash piston slidably disposed in a bore formed in said housing, said lash piston having a cavity formed therein; and

a seating piston slidably disposed in the cavity.

3. The system of Claim 2, further comprising a check disk disposed between said lash piston and said seating piston, said check disk having a bleed orifice formed therein.

4. The system of Claim 3, further comprising a piston head extending from said seating piston.

5. The system of Claim 4, wherein the distance between said piston head and said check disk regulates the flow of hydraulic fluid through the bleed orifice.

6. The system of Claim 2, wherein said valve seating device further comprises:

a bushing member disposed in said housing above said lash piston;
and

a pin slidably disposed in said bushing member, said pin having a first end in contact with said lash piston and a second end in contact with said rocker arm.

7. The system of Claim 6, further comprising a check disk disposed between said lash piston and said seating piston, said check disk having a bleed orifice formed therein.

8. The system of Claim 6, further comprising:
a fluid opening formed in said lash piston; and
a piston head extending from said seating piston, said piston head adapted to substantially cover said opening.

9. The system of Claim 1, wherein said lost motion system comprises:
a master piston slidably disposed in a bore formed in said housing;
and
a slave piston slidably disposed in said master piston.
10. The system of Claim 1, wherein the second contact surface is between the first and third contact surfaces.
11. The system of Claim 1, wherein said lost motion system and said valve seating device are adapted to receive hydraulic fluid from a common fluid supply source.
12. The system of Claim 1, wherein said valve seating device has a unique position when the engine valve is closed.
13. A system for controlling the seating velocity of an engine valve in an internal combustion engine, said system comprising:
a housing;
a lash piston slidably disposed in a bore formed in said housing,
said lash piston having a cavity formed therein; and
a seating piston slidably disposed in the cavity.

14. The system of Claim 13, further comprising a check disk disposed between said lash piston and said seating piston, said check disk having a bleed orifice formed therein.

15. The system of Claim 14, further comprising a piston head extending from said seating piston.

16. The system of Claim 15, wherein the distance between said piston head and said check disk regulates the flow of hydraulic fluid through the bleed orifice.

17. The system of Claim 13, further comprising:
a bushing member disposed in said housing above said lash piston;
and

a pin slidably disposed in said bushing member, said pin having a first end in contact with said lash piston and a second end in contact with said rocker arm.

18. The system of Claim 17, further comprising a check disk disposed between said lash piston and said seating piston, said check disk having a bleed orifice formed therein.

19. The system of Claim 17, further comprising:
a fluid opening formed in said lash piston; and
a piston head extending from said seating piston, said piston head adapted to substantially cover said opening.

20. The system of Claim 1, wherein said valve seating device has a unique position when the engine valve is closed.